General Specifications

GA10
Data Logging Software

SMARTDAC+

GS 04L65B01-01EN

■ Overview

Data Logging Software GA10 (hereafter referred to as GA10) is used to collect data from measuring instruments and controllers via communication and monitor and record the collected data.

GA10 has two setting modes for configuring data collection, monitoring, and recording: Simple Settings mode and Detail Settings mode.

Recorded data can be displayed and printed from the Viewer software.

■ Specifications

Item	Description
Maximum number of simultaneous device connections	100
Maximum number of simultaneous client connections	No limit (operation guaranteed up to 32 clients)
Maximum number of simultaneous operation projects	30
Maximum number of device registrations	1000
Maximum number of project registrations	10000
Maximum number of user registrations	100
Maximum number of clients that can run simultaneously on the same PC	1
Scan interval (when set to PC time)	100 ms, 200 ms, 500 ms, 1 s, 2 s, 5 s, 10 s, 20 s, 30 s, 1 min, 2 min, 5 min, 10 min
Scan interval (when set to device time)	The scan interval of each device.
Record interval (when set to PC time)	100 ms, 200 ms, 500 ms, 1 s, 2 s, 5 s, 10 s, 20 s, 30 s, 1 min, 2 min, 5 min, 10 min (limited to an integer multiple of the scan interval)
Record interval (when set to device time)	Same as the scan interval.
Maximum number of recording channels (tags)	2000
Number of display groups	50
Number of channels (tags) per display group	50
Language[1]	English, Japanese, Chinese, French, German, Russian, Korean

1 Make sure to use the same language setting for this software, Windows OS, and the recorders that data is to be collected from.

■ Connectable Devices and Software

The following table lists the devices and software applications that GA10 can connect to.

Name	Release Number	Interface[1]		
		RS-232	RS-422/485	Ethernet
GX10, GX20	R1.01 or later	Yes	Yes	Yes
GP10, GP20		Yes	Yes	Yes
DX1000 [2]	R2.01 or later	Yes	Yes	Yes
DX1000N [2]		Yes	Yes	Yes
DX2000 [2]		Yes	Yes	Yes
DX1000T [2]	R4.11 or later	Yes	Yes	Yes
DX2000T [2]		Yes	Yes	Yes
CX1000	R3.20 or later	Yes	Yes	Yes
CX2000		Yes	Yes	Yes
FX1000	R1.11 or later	Yes	Yes	Yes
MV1000	R1.01 or later	Yes	Yes	Yes
MV2000		Yes	Yes	Yes
μR10000	R1.31 or later	Yes	Yes	Yes
μR20000		Yes	Yes	Yes
MX100	R3.01 or later	No	No	Yes
MW100	R3.01 or later	No	No	Yes
DA100	Models released on Nov., 2002 and later	Yes	Yes	Yes
DR130	Models released on Dec., 1999 and later	Yes	Yes	Yes
DR230	• DR231/241 Released on Dec., 1999 and later • DR232/242 Released on Nov., 2002 and later	Yes	Yes	Yes
DR240		Yes	Yes	Yes
DAQLOGGER	R7.11 or later	No	No	Yes
DAQ32Plus	R11.08 or later	No	No	Yes
MXLOGGER	R2.07 or later	No	No	Yes
Devices supporting the Modbus protocol		Yes	Yes	Yes

1 Yes: Supported No: Not supported
2 When connecting GA10 to the DXAdvanced (DX1000, DX1000N, DX1000T, DX2000, DX2000T) with Security Function (/AS1) through the Ethernet interface, specify the access user to "Administrator." Additionally, note that the "Administrator" who can login to the DX is limited to one administrator.

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■ Functions

Configuration

There two setting modes for configuring the software: Simple Settings and Detail Settings. The settings that you can configure in each mode is shown below.

- Simple Settings mode: Devices to connect, collection and recording intervals, data file save destination
- Detail Settings mode: Devices, tags, display groups, collect & monitor, recording, mail, access privileges, others

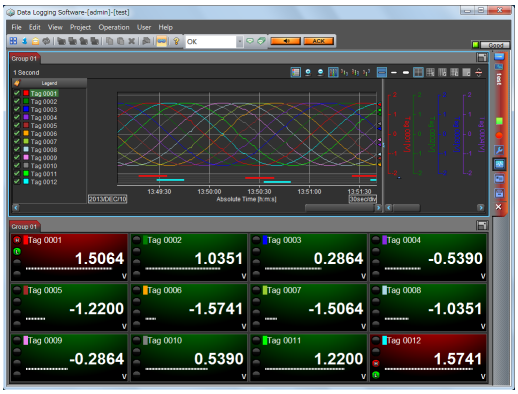
Export/Import

You can export/import a project, tag numbers, and tag comments in a server to use it.

Monitoring

The values of data being collected can be monitored from multiple clients. You can create display groups, each consisting of channels of multiple devices, and display vast amounts of collected data in an efficient manner.

- Simple Settings mode: A fixed monitor page consisting of a trend display and digital display.
- Detail Settings mode: Four types of displays (trend, digital, meter, and alarm) can be divided into up to 16 displays. You can arrange these displays for easy monitoring of data.



Alarm Feature

The alarm feature monitors alarms set on recorders and data loggers and notifies the user when alarms occur.

- Alarm display: When an alarm occurs, the corresponding tag or group on the monitor page blinks in red.
  The indication returns to its original state when the alarm is cleared.
- Alarm sound: The PC generates beeps when an alarm occurs. You can stop the beeping by clicking a button.
- Alarm ACK: You can stop the blinking alarm display and reflect the alarm-acknowledged condition on the display.
- Alarm log: The occurrence and clearance of alarms can be logged.

Email sending

GA10 can send email when alarms occur or when the communication status changes. Instantaneous values or alarm information can be attached on the email.

- Support for SMTP Authentication / POP before SMTP
- Conditions for sending email
  Alarm occurrence
  Disconnect/Recovery
  Specified period
  Specified time
  Data file created
  Data loss

2 Time modes

The timestamp is selectable from PC time or Device time. PC time is the time information that the PC in which the server is installed uses. Device time is the time information that the data collection device uses.

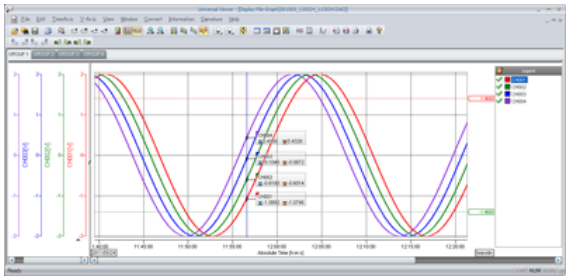
Recording

Collected data can be recorded to the PC.
Data can be saved to GA10 binary files or Excel files.
Recording can be manually controlled or automatically started and stopped based on the following conditions: Specified time, specified period, alarm, level

Viewer

The universal viewer can display the following data generated by the recorder on the screen and print it out on the printer.

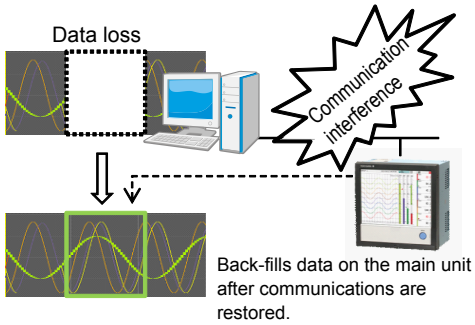
- Viewer function
  Waveform display, digital display, circular display, list display, etc.
- Data conversion:
  File conversion to ASCII or MS-Excel format



Data supplementing function (Backfill function*)

If a data dropout occurs in the data file that is being recorded due to a communication interference, this function automatically acquires data from the internal memory of the device and restores the data loss in the file.

* Only available when the device time is used for the timestamp with GX/GP/DX/MV/FX1000.



Multilogging

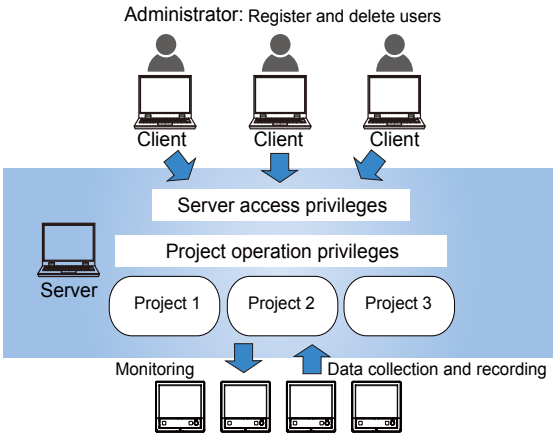
You can register multiple configurations (projects) and collect data at different times.

Additional Monitoring PCs (Clients)

By installing GA10CL to other PCs connected to the network, you can control GA10 from and share collected data between multiple PCs. It is possible for multiple PCs to access a single GA10 simultaneously.

User Management

GA10 users are registered and managed on each server. There are two user levels: administrator and user. Administrators are responsible for registering and deleting all users.
Users enter their IDs and passwords to access a server. Of the users registered in a server, only those that have been granted privileges can access projects. If a user is accessing a project, other users cannot access that project.



The operation scope of each user can be managed by assigning one of four levels: owner, manager, operator, and monitor. The table below shows the available project access privilege types and their operation scope.

Level	Privilege Type	Allowed Operations	Operation Details
1	Owner	All operations	All operations (including deleting the project) Set project access privileges.
2	Manager	Settings Operation Monitor	Edit setup data. Start/stop data monitoring or recording. View recorded data files. Open data files. Delete data files. Monitor collected data.
3	Operator	Operation Monitor	View setup data. Start/stop data monitoring or recording. View recorded data files. Open data files. Delete data files. Monitor collected data.
4	Monitor	Monitor	View recorded data files. Open data files. Monitor collected data.

Log

Up to 1000 log events that occur from when the user logs in to the server until the user logs out are displayed.

DDE Server

The DDE (Dynamic Data Exchange) server feature allows collected data to be loaded into Excel and other applications.

Trial mode

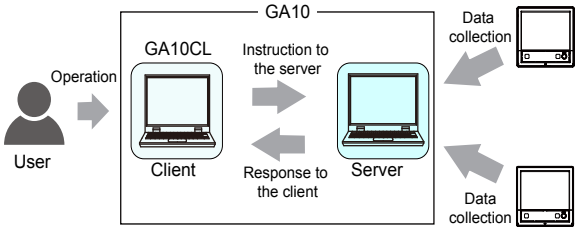
GA10 has a trial mode in which 100 channels can be used for 60 days without a license.

GX/GP web application

Online setting can be made using Web browser. For more information, please see General Specification (GS 04L51B01-01EN or GS 04L52B01-01EN.)

Server and Client

GA10 is a client-server software application.Users perform various server operations from a client. The server collects, records, and manages data received from connected devices on the basis of the instructions received from the client.
The client function and server function are installed together in a single PC. You can also install GA10CL, which is a version that contains only the client function, in other PCs. Multiple clients can simultaneously access a single server.

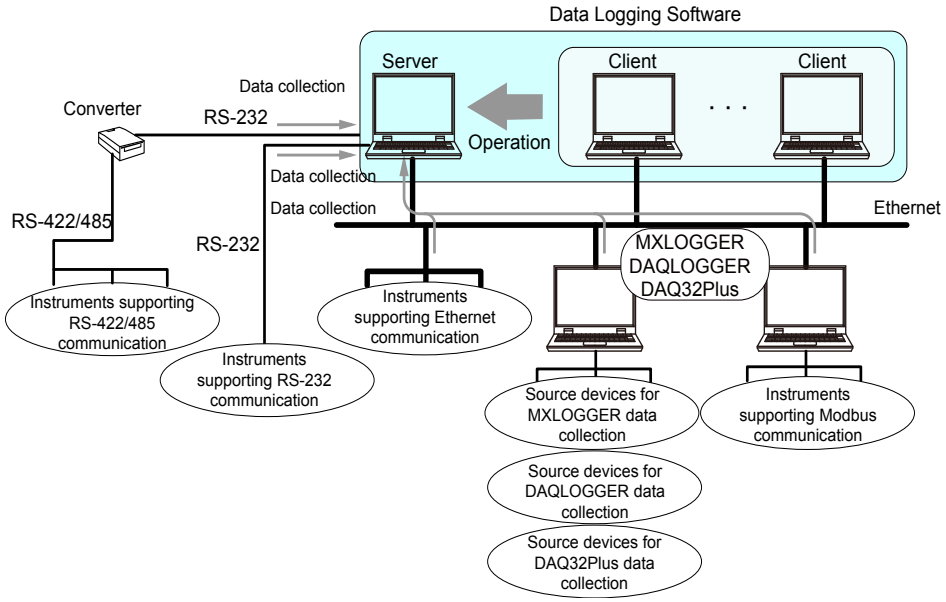


Data Collection Project

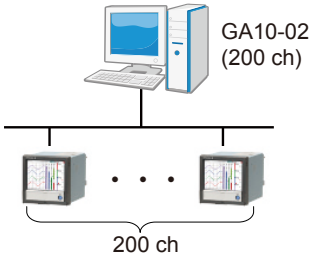
GA10 collects data in units of projects. Projects are created by users to suite their purposes.
For example, a project named “Process A” can be created to collect measured data from a process called “A.” In this way, a project can be created for each set of collected data.
For each project, the data to be collected, data to be recorded, the monitor page layout, and the like are specified.
Multiple projects can be created in a single server.

■ System Structure

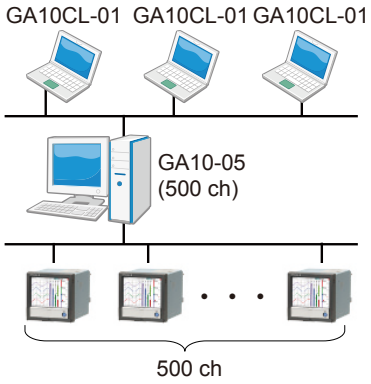
GA10 is a software application that consolidates various devices connected over a network and performs data collection. GA10 can connect to YOKOGAWA recorders and data loggers. It can also collect data that has been acquired by YOKOGAWA's data acquisition software (MXLOGGER, DAQLOGGER, and DAQ32Plus). Moreover, it supports the Modbus protocol, enabling data collection from YOKOGAWA's control instruments (temperature controllers, signal conditioners, and power monitors). GA10 can also collect data from other manufacturers' devices that support Modbus communication.



Example 1: 200 channels, 1 PC



Example 2: 500 channels, 4 PCs



■ PC System Requirements

Hardware

Item	Description
CPU	Pentium 4, 3.2 GHz or faster
Main memory	2 GB or more
Hard disk	200 MB or more of free space
Mouse	Mouse compatible with OS
Display	1024 x 768 dots or higher, 65536 colors or more
Communication ports	RS-232 or Ethernet port compatible with the OS To perform RS-232 communication or RS-422/485 communication with a connected device, the server PC needs a RS-232 serial port.

Operating system

OS[1]	Edition	32bit	64bit	Service Pack
Windows XP	Home Edition	Yes	No	SP3
	Professional	Yes	No	SP3
Windows Vista	Home Premium	Yes	No	SP2
Windows 7	Home Premium	Yes	Yes	SP1
	Professional	Yes	Yes	SP1
Windows 8	—	Yes	Yes	No SP
	Pro	Yes	Yes	No SP
Windows Server 2008	R2	No	Yes	SP1
Windows Server 2012	—	No	Yes	No SP

1 Make sure to use the same language setting for this software, Windows OS, and the recorders that data is to be collected from.

Other Operating Environments

Item	Description
Microsoft Office Excel	2007, 2010, 2013
Acrobat Reader	Adobe Reader X (latest version recommended)
RS-232 - RS-422/485 converter	To perform RS-422/485 communication with a connected device, use a converter. (YOKOGAWA ML2 recommended)

■ Model and Suffix Codes

Model	Suffix Code	Description
GA10		Data Logging Software License
Number of channels	**-01**	100 ch
	-02	200 ch
	-05	500 ch
	-10	1000 ch
	-20	2000 ch

Additional Monitoring PCs (clients)

Model	Suffix Code	Description
GA10CL		Client license for GA10
Number of licenses	**-01**	1 license
	-05	5 licenses
	-10	10 licenses
	-50	50 licenses

Additional Channels

Model	Suffix Code	Description
GA10UP		Channels upgrade license for GA10
Upgrade	**-01**	100ch to 200ch, 200ch to 500ch, 500ch to 1000ch, 1000ch to 2000ch
	-02	100ch to 500ch, 200ch to 1000ch, 500ch to 2000ch
	-03	100ch to 1000ch, 200ch to 2000ch
	-04	100ch to 2000ch

■ How the software is provided

Name	Description
License sheet	Contains the license keys. Check that the correct number of licenses are present.
GA10 Data Logging Software Downloading Software and Manuals	1 sheet (A4 size)

Software

Download the latest version from the following URL:

www.smartdacplus.com/software/en/

User's Manual

Product user's manuals can be downloaded or viewed at the following URL. To view the user's manual, you need to use Adobe Reader 7 or later by Adobe Systems.

www.smartdacplus.com/manual/en/

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